



SEQUENCE LISTING

<110> Mitchell, William M.  
Stratton, Charles W.

<120> Diagnosis and Management of Infection  
Caused by Chlamydia

<130> 50150/007002

<140> US 09/709,201

<141> 2000-11-08

<150> US 09/025,521

<151> 1998-02-18

<150> US 08/911,593

<151> 1997-08-14

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TECH CENTER 1600/2900

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 35 40 45  
 Asp Pro Cys Thr Thr Trp Cys Asp Ala Ile Ser Met Arg Met Gly Tyr  
 50 55 60  
 Tyr Gly Asp Phe Val Phe Asp Arg Val Leu Gln Thr Asp Val Asn Lys  
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Asp Pro Cys Thr Thr Trp Cys Asp Ala Ile Ser Met Ile Met Gly Tyr  
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 Tyr Gly Asp Phe Val Phe Asp Arg Val Leu Lys Thr Asp Val Asn Lys  
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 35 40 45  
 Asp Pro Cys Thr Thr Trp Cys Asp Ala Ile Ser Met Arg Met Gly Tyr  
 50 55 60  
 Tyr Gly Asp Phe Val Phe Asp Arg Val Leu Glu Thr Asp Val Asn Lys  
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<400> 48  
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 Asp Pro Cys Thr Thr Trp Cys Asp Ala Ile Ser Met Ile Met Gly Tyr  
 50 55 60  
 Tyr Gly Asp Phe Val Phe Asp Arg Val Leu Lys Thr Asp Val Asn Lys  
 65 70 75 80  
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<400> 49

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Leu Met Ile Asp Gly Ile Leu Trp Glu Gly Phe Gly Gly Asp Pro Cys  
35 40 45  
Asp Pro Cys Thr Thr Trp Cys Asp Ala Ile Ser Met Ile Met Gly Tyr  
50 55 60  
Tyr Gly Asp Phe Val Phe Asp Arg Val Leu Lys Thr Asp Val Asn Lys  
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Leu Met Ile Asp Gly Ile Leu Trp Glu Gly Phe Gly Gly Asp Pro Cys  
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Asp Pro Cys Thr Thr Trp Cys Asp Ala Ile Ser Met Ile Met Gly Tyr  
50 55 60  
Tyr Gly Asp Phe Val Phe Asp Arg Val Leu Lys Thr Asp Val Asn Lys  
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Ser Thr Leu Ser Lys  
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<213> Homo sapiens

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Leu Met Ile Asp Gly Ile Leu Trp Glu Gly Phe Gly Gly Asp Pro Cys  
35 40 45  
Asp Pro Cys Thr Thr Trp Cys Asp Ala Ile Ser Met Val Met Gly Tyr  
50 55 60  
Tyr Gly Asp Phe Val Phe Asp Arg Val Leu Lys Thr Asp Val Asn Lys  
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35 40 45  
Asp Pro Cys Thr Thr Trp Cys Asp Ala Ile Ser Met Arg Met Gly Tyr  
50 55 60  
Tyr Gly Asp Phe Val Phe Asp Arg Val Leu Lys Thr Asp Val Asn Lys  
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35 40 45  
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50 55 60  
Tyr Gly Asp Phe Val Phe Asp Arg Val Leu Lys Thr Asp Val Asn Lys  
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Tyr	Gly	Asp	Phe	Val	Phe	Asp	Arg	Val	Leu	Lys	Thr	Asp	Val	Asn	Lys		
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Glu	Phe	Gln	Met	Gly	Ala	Glu	Pro	Thr	Thr	Ser	Asp	Thr	Ala	Gly	Leu		
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Leu	Met	Ile	Asp	Gly	Ile	Leu	Trp	Glu	Gly	Phe	Gly	Gly	Asp	Pro	Cys		
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Asp	Pro	Cys	Thr	Thr	Trp	Cys	Asp	Ala	Ile	Ser	Met	Arg	Met	Gly	Leu		
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Tyr	Leu	Asp	Phe	Val	Phe	Asp	Arg	Val	Leu	Lys	Thr	Asp	Val	Asn	Lys		
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Gln	Phe	Glu	Met	Gly	Ala	Ala	Pro	Thr	Gly	Asp	Ala	Asp	Leu	Thr	Thr		
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Tyr	Gly	Asp	Phe	Val	Tyr	Asp	Ile	Val	Leu	Lys	Val	Asp	Ala	Pro	Lys		
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Phe Asp Val Phe Cys Thr Leu Gly Ala Thr Ser Gly Tyr Leu Lys Gly  
35 40 45  
Asn Ser Ala Ser Phe Asn Leu Val Gly Leu Phe Gly Asp Asn Glu Asn  
50 55 60  
His Ala Thr Val Ser Asp Ser Lys Leu Val Pro Asn Met Ser Leu Asp  
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Gly Ala Arg Ala  
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<210> 58

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<213> Homo sapiens

<400> 58

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20 25 30  
Phe Asp Val Phe Cys Thr Leu Gly Ala Ser Ser Gly Tyr Leu Lys Gly  
35 40 45  
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Gln  
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<210> 59

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<400> 59

Cys Thr Ala Arg Glu Asn Pro Ala Tyr Gly Arg His Met Gln Asp Ala  
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20 25 30  
Phe Asp Val Phe Cys Thr Leu Gly Ala Thr Ser Gly Tyr Leu Lys Gly  
35 40 45  
Asn Ser Ala Ser Phe Asn Leu Val Gly Leu Phe Gly Asp Asn Glu Asn  
50 55 60  
Gln Lys Thr Val Lys Ala Glu Ser Val Pro Asn Met Ser Phe Asp Gln  
65 70 75 80  
Ser Val Val Glu Leu Tyr Thr Asp Thr Thr Phe Ala Trp Ser Val Gly  
85 90 95  
Ala Arg Ala Thr Lys Val Ser Asn Gly Thr Phe Val Pro Asn Met Ser  
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Ser Val Gly Ala Arg Ala  
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120

125

<210> 60  
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Phe Asp Val Phe Cys Thr Leu Gly Ala Ser Ser Gly Tyr Leu Lys Gly  
35 40 45  
Asn Ser Ala Ser Phe Asn Leu Val Gly Leu Phe Gly Asp Asn Glu Asn  
50 55 60  
Gln Ser Thr Val Lys Thr Asn Ser Val Pro Asn Met Ser Leu Asp Gln  
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Ala Arg Ala

<210> 61  
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Phe Asp Val Phe Cys Thr Leu Gly Ala Thr Ser Gly Tyr Leu Lys Gly  
35 40 45  
Asn Ser Ala Ser Phe Asn Leu Val Gly Leu Phe Gly Asp Asn Glu Asn  
50 55 60  
Gln Ser Thr Val Lys Lys Asp Ala Val Pro Asn Met Ser Phe Asp Gln  
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Ser Val Val Glu Leu Tyr Thr Asp Thr Thr Phe Ala Trp Ser Val Gly  
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Ala Arg Ala

<210> 62  
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Glu Met Phe Thr Asn Cys Ala Tyr Thr Ala Leu Ile Asn Trp Asp Arg

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Ala	Thr	Lys	Pro	Ala	Ala	Asp	Ser	Ile	Pro	Asn	Val	Gln	Leu	Asn	Gln
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Ser	Val	Val	Glu	Leu	Tyr	Thr	Asp	Thr	Thr	Phe	Ala	Trp	Ser	Val	Gly
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Ala	Arg	Ala													

<210> 63  
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B1

<400> 63															
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		20					25					30			
Phe	Asp	Val	Phe	Cys	Thr	Leu	Gly	Ala	Thr	Thr	Gly	Tyr	Leu	Lys	Gly
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Asn	Ser	Ala	Ser	Phe	Asn	Leu	Val	Gly	Leu	Phe	Gly	Thr	Lys	Thr	Gln
	50					55					60				
Ser	Ser	Ser	Phe	Asn	Thr	Ala	Lys	Leu	Ile	Pro	Asn	Thr	Ala	Leu	Asp
65					70					75					80
Gln	Ser	Val	Val	Glu	Leu	Tyr	Ile	Asn	Thr	Thr	Phe	Ala	Trp	Ser	Val
				85				90						95	
Gly	Ala	Arg	Ala												
			100												

<210> 64  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 64															
Asn	Val	Ala	Arg	Pro	Asn	Pro	Ala	Tyr	Gly	Lys	His	Met	Gln	Asp	Ala
1				5					10					15	
Glu	Met	Phe	Thr	Asn	Ala	Ala	Tyr	Met	Ala	Leu	Ile	Asn	Trp	Asp	Arg
		20					25					30			
Phe	Asp	Val	Phe	Cys	Thr	Leu	Gly	Ala	Thr	Thr	Gly	Tyr	Leu	Lys	Gly
	35						40				45				
Asn	Ser	Ala	Ser	Phe	Asn	Leu	Val	Gly	Leu	Phe	Gly	Thr	Lys	Thr	Gln
	50					55					60				
Ser	Ser	Gly	Phe	Asp	Thr	Ala	Asn	Ile	Val	Pro	Asn	Thr	Ala	Leu	Asn
65					70					75					80
Gln	Ala	Val	Val	Glu	Leu	Tyr	Thr	Asp	Thr	Thr	Phe	Ala	Trp	Ser	Val
				85				90						95	
Gly	Ala	Arg	Ala												
			100												

<210> 65

<211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 65  
 Asn Val Ala Arg Pro Asn Pro Ala Tyr Gly Lys His Met Gln Asp Ala  
 1 5 10 15  
 Glu Met Phe Thr Asn Ala Ala Tyr Met Ala Leu Ile Asn Trp Asp Arg  
 20 25 30  
 Phe Asp Val Phe Cys Thr Leu Gly Ala Thr Thr Gly Tyr Leu Lys Gly  
 35 40 45  
 Asn Ser Ala Ser Phe Asn Leu Val Gly Leu Phe Gly Thr Lys Thr Lys  
 50 55 60  
 Ser Ser Asp Phe Asn Thr Ala Lys Leu Val Pro Asn Ile Ala Leu Asn  
 65 70 75 80  
 Arg Ala Val Val Glu Leu Tyr Thr Asp Thr Thr Phe Ala Trp Ser Val  
 85 90 95  
 Gly Ala Arg Ala  
 100

<210> 66  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 66  
 Asn Val Ala Arg Pro Asn Pro Ala Tyr Gly Lys His Met Gln Asp Ala  
 1 5 10 15  
 Glu Met Phe Thr Asn Ala Ala Tyr Met Ala Leu Ile Asn Trp Asp Arg  
 20 25 30  
 Phe Asp Val Phe Cys Thr Leu Gly Ala Thr Thr Gly Tyr Leu Lys Gly  
 35 40 45  
 Asn Ser Ala Ser Phe Asn Leu Val Gly Leu Phe Gly Thr Lys Thr Gln  
 50 55 60  
 Ser Thr Asn Phe Asn Thr Ala Lys Leu Val Pro Asn Thr Ala Leu Asn  
 65 70 75 80  
 Gln Ala Val Val Glu Leu Tyr Thr Asp Thr Thr Phe Ala Trp Ser Val  
 85 90 95  
 Gly Ala Arg Ala  
 100

<210> 67  
 <211> 96  
 <212> PRT  
 <213> Homo sapiens

<400> 67  
 Ala Ser Arg Glu Asn Pro Ala Tyr Gly Lys His Met Gln Asp Ala Glu  
 1 5 10 15  
 Met Phe Thr Asn Ala Ala Tyr Met Ala Leu Ile Asn Trp Asp Arg Phe  
 20 25 30  
 Asp Val Phe Cys Thr Leu Gly Ala Thr Ser Gly Tyr Leu Lys Gly Asn  
 35 40 45  
 Ser Ala Ala Phe Asn Leu Val Gly Leu Phe Gly Arg Asp Glu Thr Ala  
 50 55 60  
 Val Ala Ala Asp Asp Ile Pro Asn Val Ser Leu Ser Gln Ala Val Val

65		70		75		80									
Glu	Leu	Tyr	Thr	Asp	Thr	Ala	Phe	Ala	Trp	Ser	Val	Gly	Ala	Arg	Ala
				85					90					95	

<210> 68  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 68

Tyr	Thr	Thr	Ala	Val	Asp	Arg	Pro	Asn	Pro	Ala	Tyr	Asn	Lys	His	Leu
1				5					10					15	
His	Asp	Ala	Glu	Trp	Phe	Thr	Asn	Ala	Gly	Ile	Phe	Ala	Leu	Ile	Asn
			20					25					30		
Trp	Asp	Arg	Phe	Asp	Val	Phe	Cys	Thr	Leu	Gly	Ala	Ser	Asn	Gly	Ile
		35					40					45			
Arg	Lys	Gly	Asn	Ser	Thr	Ala	Phe	Asn	Leu	Val	Gly	Leu	Phe	Gly	Val
	50					55					60				
Lys	Gly	Thr	Thr	Val	Asn	Ala	Asn	Glu	Leu	Pro	Asn	Val	Ser	Leu	Ser
65					70					75					80
Asn	Gly	Val	Val	Glu	Leu	Tyr	Thr	Asp	Thr	Ser	Phe	Ser	Trp	Ser	Val
				85					90					95	
Gly	Ala	Arg	Ala												
				100											

<210> 69  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 69

Ala	Leu	Trp	Glu	Cys	Gly	Cys	Ala	Thr	Leu	Gly	Ala	Ser	Phe	Gln	Tyr
1				5					10					15	
Ala	Gln	Ser	Lys	Pro	Lys	Val	Glu	Glu	Leu	Asn	Val	Leu	Cys	Asn	Ala
			20					25					30		
Ala	Glu	Phe	Thr	Ile	Asn	Lys	Pro	Lys	Gly	Tyr	Val	Gly	Gln	Glu	Phe
		35					40					45			
Pro	Leu	Asp	Leu	Lys	Ala	Gly	Thr	Asp	Gly	Val	Thr	Gly	Thr	Lys	Asp
	50					55					60				
Ala	Ser	Ile	Asp	Tyr	His	Glu	Trp	Gln	Ala	Ser	Leu	Ala	Leu	Ser	Tyr
65					70					75					80
Arg	Leu	Asn	Met	Phe	Thr	Pro	Tyr	Ile	Gly	Val	Lys	Trp	Ser	Arg	Ala
				85					90					95	
Ser	Phe	Asp	Ala												
				100											

<210> 70  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 70

Ala	Leu	Trp	Glu	Cys	Gly	Cys	Ala	Thr	Leu	Gly	Ala	Ser	Phe	Gln	Tyr
1				5					10					15	
Ala	Gln	Ser	Lys	Pro	Lys	Val	Glu	Glu	Leu	Asn	Val	Leu	Cys	Asn	Ala



20 25 30  
 Ala Glu Phe Thr Ile Asn Lys Pro Lys Gly Tyr Val Gly Lys Glu Leu  
 35 40 45  
 Pro Leu Asp Leu Thr Ala Gly Thr Asp Ala Ala Thr Gly Thr Lys Asp  
 50 55 60  
 Ala Ser Ile Asp Tyr His Glu Trp Gln Ala Ser Leu Ala Leu Ser Tyr  
 65 70 75 80  
 Arg Leu Asn Met Phe Thr Pro Tyr Ile Gly Val Lys Trp Ser Arg Ala  
 85 90 95  
 Ser Phe Asp Ala  
 100

<210> 71  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 71  
 Ala Leu Trp Glu Cys Gly Cys Ala Thr Leu Gly Ala Ser Phe Gln Tyr  
 1 5 10 15  
 Ala Gln Ser Lys Pro Lys Val Glu Glu Leu Asn Val Leu Cys Asn Ala  
 20 25 30  
 Ala Glu Phe Thr Ile Asn Lys Pro Lys Gly Tyr Val Gly Lys Glu Phe  
 35 40 45  
 Pro Leu Asp Leu Thr Ala Gly Thr Asp Ala Ala Thr Gly Thr Lys Asp  
 50 55 60  
 Ala Ser Ile Asp Tyr His Glu Trp Gln Ala Ser Leu Ala Leu Ser Tyr  
 65 70 75 80  
 Arg Leu Asn Met Phe Thr Pro Tyr Ile Gly Val Lys Trp Ser Arg Ala  
 85 90 95  
 Ser Phe Asp Ala  
 100

<210> 72  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 72  
 Ala Leu Trp Glu Cys Gly Cys Ala Thr Leu Gly Ala Ser Phe Gln Tyr  
 1 5 10 15  
 Ala Gln Ser Lys Pro Lys Val Glu Glu Leu Asn Val Leu Cys Asn Ala  
 20 25 30  
 Ala Glu Phe Thr Ile Asn Lys Pro Lys Gly Tyr Val Gly Gln Glu Phe  
 35 40 45  
 Pro Leu Ala Leu Ile Ala Gly Thr Asp Ala Ala Thr Gly Thr Lys Asp  
 50 55 60  
 Ala Ser Ile Asp Tyr His Glu Trp Gln Ala Ser Leu Ala Leu Ser Tyr  
 65 70 75 80  
 Arg Leu Asn Met Phe Thr Pro Tyr Ile Gly Val Lys Trp Ser Arg Ala  
 85 90 95  
 Ser Phe Asp Ala  
 100

<210> 73

<211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 73  
 Ala Leu Trp Glu Cys Gly Cys Ala Thr Leu Gly Ala Ser Phe Gln Tyr  
 1 5 10 15  
 Ala Gln Ser Lys Pro Lys Val Glu Glu Leu Asn Val Leu Cys Asn Ala  
 20 25 30  
 Ala Glu Phe Thr Ile Asn Lys Pro Lys Gly Tyr Val Gly Lys Glu Phe  
 35 40 45  
 Pro Leu Asp Leu Thr Ala Gly Thr Asp Ala Ala Thr Gly Thr Lys Asp  
 50 55 60  
 Ala Ser Ile Asp Tyr His Glu Trp Gln Ala Ser Leu Ala Leu Ser Tyr  
 65 70 75 80  
 Arg Leu Asn Met Phe Thr Pro Tyr Ile Gly Val Lys Trp Ser Arg Ala  
 85 90 95  
 Ser Phe Asp Ala  
 100

<210> 74  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 74  
 Ala Leu Trp Glu Cys Gly Cys Ala Thr Leu Gly Ala Ser Phe Gln Tyr  
 1 5 10 15  
 Ala Gln Ser Lys Pro Lys Ile Glu Glu Leu Asn Val Leu Cys Asn Ala  
 20 25 30  
 Ala Glu Phe Thr Ile Asn Lys Pro Lys Gly Tyr Val Gly Lys Glu Phe  
 35 40 45  
 Pro Leu Asp Leu Thr Ala Gly Thr Asp Ala Ala Thr Gly Thr Lys Asp  
 50 55 60  
 Ala Ser Ile Asp Tyr His Glu Trp Gln Ala Ser Leu Ser Leu Ser Tyr  
 65 70 75 80  
 Arg Leu Asn Met Phe Thr Pro Tyr Ile Gly Val Lys Trp Ser Arg Ala  
 85 90 95  
 Ser Phe Asp Ser  
 100

<210> 75  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 75  
 Ala Leu Trp Glu Cys Gly Cys Ala Thr Leu Gly Ala Ser Phe Gln Tyr  
 1 5 10 15  
 Ala Gln Ser Lys Pro Lys Val Glu Glu Leu Asn Val Leu Cys Asn Ala  
 20 25 30  
 Ser Glu Phe Thr Ile Asn Lys Pro Lys Gly Tyr Val Gly Ala Glu Phe  
 35 40 45  
 Pro Leu Asn Ile Thr Ala Gly Thr Glu Ala Ala Thr Gly Thr Lys Asp  
 50 55 60  
 Ala Ser Ile Asp Tyr His Glu Trp Gln Ala Ser Leu Ala Leu Ser Tyr

65 70 75 80  
 Arg Leu Asn Met Phe Thr Pro Tyr Ile Gly Val Lys Trp Ser Arg Val  
 85 90 95  
 Ser Phe Asp Ala  
 100

<210> 76  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 76  
 Ala Leu Trp Glu Cys Gly Cys Ala Thr Leu Gly Ala Ser Phe Gln Tyr  
 1 5 10 15  
 Ala Gln Ser Lys Pro Lys Val Glu Glu Leu Asn Val Leu Cys Asn Ala  
 20 25 30  
 Ser Glu Phe Thr Ile Asn Lys Pro Lys Gly Tyr Val Gly Ala Glu Phe  
 35 40 45  
 Pro Leu Asp Ile Thr Ala Gly Thr Glu Ala Ala Thr Gly Thr Lys Asp  
 50 55 60  
 Ala Ser Ile Asp Tyr His Glu Trp Gln Ala Ser Leu Ala Leu Ser Tyr  
 65 70 75 80  
 Arg Leu Asn Met Phe Thr Pro Tyr Ile Gly Val Lys Trp Ser Arg Val  
 85 90 95  
 Ser Phe Asp Ala  
 100

<210> 77  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 77  
 Ala Leu Trp Glu Cys Gly Cys Ala Thr Leu Gly Ala Ser Phe Gln Tyr  
 1 5 10 15  
 Ala Gln Ser Lys Pro Lys Val Glu Glu Leu Asn Val Leu Cys Asn Ala  
 20 25 30  
 Ser Glu Phe Thr Ile Asn Lys Pro Lys Gly Tyr Val Gly Ala Glu Phe  
 35 40 45  
 Pro Leu Asp Ile Thr Ala Gly Thr Glu Ala Ala Thr Gly Thr Lys Asp  
 50 55 60  
 Ala Ser Ile Asp Tyr His Glu Trp Gln Ala Ser Leu Ala Leu Ser Tyr  
 65 70 75 80  
 Arg Leu Asn Met Phe Thr Pro Tyr Ile Gly Val Lys Trp Ser Arg Val  
 85 90 95  
 Ser Phe Asp Ala  
 100

<210> 78  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 78  
 Ala Leu Trp Glu Cys Gly Cys Ala Thr Leu Gly Ala Ser Phe Gln Tyr

1	5	10	15
Ala Gln Ser Lys Pro Lys Val Glu Glu Leu Asn Val Leu Cys Asp Ala			
	20	25	30
Ser Glu Phe Thr Ile Asn Lys Pro Lys Gly Tyr Val Gly Ala Glu Phe			
	35	40	45
Pro Leu Asp Ile Thr Ala Gly Thr Glu Ala Ala Thr Gly Thr Lys Asp			
	50	55	60
Ala Ser Ile Asp Tyr His Glu Trp Gln Ala Ser Leu Ala Leu Ser Tyr			
65	70	75	80
Arg Leu Asn Met Phe Thr Pro Tyr Ile Gly Val Lys Trp Ser Arg Val			
	85	90	95
Ser Phe Asp Ala			
100			

<210> 79  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

B1

<400> 79
Ala Leu Trp Glu Cys Gly Cys Ala Thr Leu Gly Ala Ser Phe Gln Tyr
1 5 10 15
Ala Gln Ser Lys Pro Lys Val Glu Glu Leu Asn Val Leu Cys Asn Ala
20 25 30
Ala Glu Phe Thr Ile Asn Lys Pro Lys Gly Tyr Val Gly Gln Glu Phe
35 40 45
Pro Leu Asn Ile Lys Ala Gly Thr Val Ser Ala Thr Asp Thr Lys Asp
50 55 60
Ala Ser Ile Asp Tyr His Glu Trp Gln Ala Ser Leu Ala Leu Ser Tyr
65 70 75 80
Arg Leu Asn Met Phe Thr Pro Tyr Ile Gly Val Lys Trp Ser Arg Ala
85 90 95
Ser Phe Asp Ala
100

<210> 80  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 80
Gly Leu Trp Glu Cys Gly Cys Ala Thr Leu Gly Glu Ser Phe Gln Tyr
1 5 10 15
Ala Gln Ser Lys Pro Lys Val Glu Glu Leu Asn Val Ile Cys Asn Val
20 25 30
Ser Gln Phe Ser Val Asn Lys Pro Lys Gly Tyr Lys Gly Val Ala Phe
35 40 45
Pro Leu Pro Thr Asp Ala Gly Val Ala Thr Ala Thr Gly Thr Lys Ser
50 55 60
Ala Thr Ile Asn Tyr His Glu Trp Gln Val Gly Ala Ser Leu Ser Tyr
65 70 75 80
Arg Leu Asn Ser Leu Val Pro Tyr Ile Gly Val Gln Trp Ser Arg Ala
85 90 95
Thr Phe Asp Ala
100

<210> 81  
 <211> 94  
 <212> PRT  
 <213> Homo sapiens

<400> 81  
 Asp Thr Ile Arg Ile Ala Gln Pro Lys Ser Ala Thr Thr Val Phe Asp  
 1 5 10 15  
 Val Thr Thr Leu Asn Pro Thr Ile Ala Gly Ala Gly Asp Val Lys Ala  
 20 25 30  
 Ser Ala Glu Gly Gln Leu Gly Asp Thr Met Gln Ile Val Ser Leu Gln  
 35 40 45  
 Leu Asn Lys Met Lys Ser Arg Lys Ser Cys Gly Ile Ala Val Gly Thr  
 50 55 60  
 Thr Ile Val Asp Ala Asp Lys Tyr Ala Val Thr Val Glu Thr Arg Leu  
 65 70 75 80  
 Ile Asp Glu Arg Ala Ala His Val Asn Ala Gln Phe Arg Phe  
 85 90

<210> 82  
 <211> 92  
 <212> PRT  
 <213> Homo sapiens

<400> 82  
 Asp Thr Ile Arg Ile Ala Gln Pro Lys Ser Ala Glu Thr Ile Phe Asp  
 1 5 10 15  
 Val Thr Thr Leu Asn Pro Thr Ile Ala Gly Ala Gly Asp Val Lys Thr  
 20 25 30  
 Ser Ala Glu Gly Gln Leu Gly Asp Thr Met Gln Ile Val Ser Leu Gln  
 35 40 45  
 Leu Asn Met Lys Ser Arg Lys Cys Gly Ile Ala Val Gly Thr Thr Ile  
 50 55 60  
 Val Asp Ala Asp Lys Tyr Ala Ile Thr Val Glu Thr Arg Leu Ile Asp  
 65 70 75 80  
 Glu Arg Ala Ala His Val Asn Ala Gln Phe Arg Phe  
 85 90

<210> 83  
 <211> 94  
 <212> PRT  
 <213> Homo sapiens

<400> 83  
 Asp Thr Ile Arg Ile Ala Gln Pro Lys Ser Ala Thr Ala Ile Phe Asp  
 1 5 10 15  
 Thr Thr Thr Leu Asn Pro Thr Ile Ala Gly Ala Gly Asp Val Lys Thr  
 20 25 30  
 Gly Thr Glu Gly Gln Leu Gly Asp Thr Met Gln Ile Val Ser Leu Gln  
 35 40 45  
 Leu Asn Lys Met Lys Ser Arg Lys Ser Cys Gly Ile Ala Val Gly Thr  
 50 55 60  
 Thr Ile Val Asp Ala Asp Lys Tyr Ala Val Thr Val Glu Thr Arg Leu  
 65 70 75 80  
 Ile Asp Glu Arg Ala Ala His Val Asn Ala Gln Phe Arg Phe  
 85 90

<210> 84  
 <211> 94  
 <212> PRT  
 <213> Homo sapiens

<400> 84  
 Asp Thr Ile Arg Ile Ala Gln Pro Lys Ser Ala Thr Ala Ile Phe Asp  
 1 5 10 15  
 Thr Thr Thr Leu Asn Pro Thr Ile Ala Gly Ala Gly Asp Val Lys Ala  
 20 25 30  
 Ser Ala Glu Gly Gln Leu Gly Asp Thr Met Gln Ile Val Ser Leu Gln  
 35 40 45  
 Leu Asn Lys Met Lys Ser Arg Lys Ser Cys Gly Ile Ala Val Gly Thr  
 50 55 60  
 Thr Ile Val Asp Ala Asp Lys Tyr Ala Val Thr Val Glu Thr Arg Leu  
 65 70 75 80  
 Ile Asp Glu Arg Ala Ala His Val Asn Ala Gln Phe Arg Phe  
 85 90

B1  
 <210> 85  
 <211> 94  
 <212> PRT  
 <213> Homo sapiens

<400> 85  
 Asp Thr Ile Arg Ile Ala Gln Pro Lys Leu Ala Thr Ala Ile Phe Asp  
 1 5 10 15  
 Thr Thr Thr Leu Asn Pro Thr Ile Ala Gly Ala Gly Asp Glu Lys Ala  
 20 25 30  
 Asn Ala Glu Gly Gln Leu Gly Asp Thr Met Gln Ile Val Ser Leu Gln  
 35 40 45  
 Leu Asn Lys Met Lys Ser Arg Lys Ser Cys Gly Ile Ala Val Gly Thr  
 50 55 60  
 Thr Ile Val Asp Ala Asp Lys Tyr Ala Val Thr Val Glu Thr Arg Leu  
 65 70 75 80  
 Ile Asp Glu Arg Ala Ala His Val Asn Ala Gln Phe Arg Phe  
 85 90

<210> 86  
 <211> 95  
 <212> PRT  
 <213> Homo sapiens

<400> 86  
 Asp Thr Ile Arg Ile Ala Gln Pro Arg Leu Val Thr Pro Val Val Asp  
 1 5 10 15  
 Ile Thr Thr Leu Asn Pro Thr Ile Ala Gly Ala Cys Asp Ser Lys Ala  
 20 25 30  
 Gly Asn Thr Glu Gly Gln Ile Ser Asp Thr Met Gln Ile Val Ser Leu  
 35 40 45  
 Gln Leu Asn Lys Met Lys Ser Arg Lys Ser Cys Gly Ile Ala Val Gly  
 50 55 60  
 Thr Thr Ile Val Asp Ala Asp Lys Tyr Ala Val Thr Val Glu Thr Arg  
 65 70 75 80  
 Leu Ile Asp Glu Arg Ala Ala His Val Asn Ala Gln Phe Arg Phe

85

90

95

<210> 87  
 <211> 95  
 <212> PRT  
 <213> Homo sapiens

<400> 87  
 Asp Thr Ile Arg Ile Ala Gln Pro Lys Leu Ala Glu Ala Ile Leu Asp  
 1 5 10 15  
 Val Thr Thr Leu Asn Arg Thr Thr Ala Gly Lys Gly Ser Val Val Ser  
 20 25 30  
 Ala Gly Thr Asp Asn Glu Leu Ala Asp Thr Met Gln Ile Val Ser Leu  
 35 40 45  
 Gln Leu Asn Lys Met Lys Ser Arg Lys Ser Cys Gly Ile Ala Val Gly  
 50 55 60  
 Thr Thr Ile Val Asp Ala Asp Lys Tyr Ala Val Thr Val Glu Ala Arg  
 65 70 75 80  
 Leu Ile Asp Glu Arg Ala Ala His Val Asn Ala Gln Phe Arg Phe  
 85 90 95

<210> 88  
 <211> 94  
 <212> PRT  
 <213> Homo sapiens

<400> 88  
 Asp Thr Ile Arg Ile Ala Gln Pro Lys Leu Ala Lys Pro Val Leu Asp  
 1 5 10 15  
 Thr Thr Thr Leu Asn Pro Thr Ile Ala Gly Lys Gly Thr Val Val Ser  
 20 25 30  
 Ser Ala Glu Asn Glu Leu Ala Asp Thr Met Gln Ile Val Ser Leu Gln  
 35 40 45  
 Leu Asn Lys Met Lys Ser Arg Lys Ser Cys Gly Ile Ala Val Gly Thr  
 50 55 60  
 Thr Ile Val Asp Ala Asp Lys Tyr Ala Val Thr Val Glu Thr Arg Leu  
 65 70 75 80  
 Ile Asp Glu Arg Ala Ala His Val Asn Ala Gln Phe Arg Phe  
 85 90

<210> 89  
 <211> 94  
 <212> PRT  
 <213> Homo sapiens

<400> 89  
 Asp Thr Ile Arg Ile Ala Gln Pro Lys Leu Ala Glu Ala Ile Leu Asp  
 1 5 10 15  
 Val Thr Thr Leu Asn Pro Thr Ile Ala Gly Lys Gly Thr Val Val Ala  
 20 25 30  
 Ser Gly Ser Asp Asn Asp Leu Ala Asp Thr Met Gln Ile Val Ser Leu  
 35 40 45  
 Gln Leu Asn Lys Met Lys Ser Arg Lys Ser Cys Gly Ile Ala Val Gly  
 50 55 60  
 Thr Thr Ile Val Asp Ala Asp Lys Tyr Ala Val Thr Val Glu Thr Arg

65                      70                      75                      80  
 Leu Ile Asp Glu Arg Ala Ala His Val Asn Ala Gln Phe Arg  
                          85                      90

<210> 90  
 <211> 95  
 <212> PRT  
 <213> Homo sapiens

<400> 90  
 Asp Thr Ile Arg Ile Ala Gln Pro Lys Leu Ala Glu Ala Val Leu Asp  
 1                      5                      10                      15  
 Val Thr Thr Leu Asn Pro Thr Ile Ala Gly Lys Gly Ser Val Val Ala  
                          20                      25                      30  
 Ser Gly Ser Glu Asn Glu Leu Ala Asp Thr Met Gln Ile Val Ser Leu  
                          35                      40                      45  
 Gln Leu Asn Lys Met Lys Ser Arg Lys Ser Cys Gly Ile Ala Val Gly  
                          50                      55                      60  
 Thr Thr Ile Val Asp Ala Asp Lys Tyr Ala Val Thr Val Glu Thr Arg  
 65                      70                      75                      80  
 Leu Ile Asp Glu Arg Ala Ala His Val Asn Ala Gln Phe Arg Phe  
                          85                      90                      95

<210> 91  
 <211> 91  
 <212> PRT  
 <213> Homo sapiens

<400> 91  
 Asp Thr Ile Arg Ile Ala Gln Pro Lys Leu Glu Thr Ser Ile Leu Lys  
 1                      5                      10                      15  
 Met Thr Thr Trp Asn Pro Thr Ile Ser Gly Ser Gly Ile Asp Val Asp  
                          20                      25                      30  
 Thr Lys Ile Thr Asp Thr Leu Gln Ile Val Ser Leu Gln Leu Asn Lys  
                          35                      40                      45  
 Met Lys Ser Arg Lys Ser Cys Leu Ile Ala Ile Gly Thr Thr Ile Val  
                          50                      55                      60  
 Asp Ala Asp Lys Tyr Ala Val Thr Val Glu Thr Arg Leu Ile Asp Glu  
 65                      70                      75                      80  
 Arg Ala Ala His Val Asn Ala Gln Phe Arg Phe  
                          85                      90

<210> 92  
 <211> 93  
 <212> PRT  
 <213> Homo sapiens

<400> 92  
 Asp Asn Ile Arg Ile Ala Gln Pro Lys Leu Pro Thr Ala Val Leu Asn  
 1                      5                      10                      15  
 Leu Thr Ala Trp Asn Pro Ser Leu Leu Gly Asn Ala Thr Ala Leu Ser  
                          20                      25                      30  
 Thr Thr Asp Ser Phe Ser Asp Phe Met Gln Ile Val Ser Cys Gln Ile  
                          35                      40                      45  
 Asn Lys Phe Lys Ser Arg Lys Ala Cys Val Thr Ala Val Ala Thr Leu



50                      55                      60  
 Ile Val Asp Ala Asp Lys Trp Ser Leu Thr Ala Glu Ala Arg Leu Asn  
 65                      70                      75                      80  
 Asp Glu Arg Ala Ala His Ser Gly Ala Gln Phe Arg Phe  
                     85                      90

<210> 93  
 <211> 17  
 <212> PRT  
 <213> Homo sapiens

<400> 93  
 Cys Thr Gly Ser Ala Ala Ala Asn Tyr Thr Thr Ala Val Asp Arg Pro  
 1                      5                      10                      15  
 Asn

<210> 94  
 <211> 18  
 <212> PRT  
 <213> Homo sapiens

<400> 94  
 Cys Thr Gly Asp Ala Asp Leu Thr Thr Ala Pro Thr Pro Ala Ser Arg  
 1                      5                      10                      15  
 Glu Asn

<210> 95  
 <211> 19  
 <212> PRT  
 <213> Homo sapiens

<400> 95  
 Cys Thr Thr Ala Thr Gly Asn Ala Ala Ala Pro Ser Thr Cys Thr Ala  
 1                      5                      10                      15  
 Arg Glu Asn

<210> 96  
 <211> 17  
 <212> PRT  
 <213> Homo sapiens

<400> 96  
 Cys Ala Ser Gly Thr Ala Ser Asn Thr Thr Val Ala Ala Asp Arg Ser  
 1                      5                      10                      15  
 Asn

<210> 97  
 <211> 15  
 <212> PRT

<213> Homo sapiens

<400> 97

Cys Phe Gly Val Lys Gly Thr Thr Val Asn Ala Asn Glu Lys Pro  
1 5 10 15

<210> 98

<211> 15

<212> PRT

<213> Homo sapiens

<400> 98

Cys Phe Gly Arg Asp Glu Thr Ala Val Ala Ala Asp Asp Ile Pro  
1 5 10 15

<210> 99

<211> 18

<212> PRT

<213> Homo sapiens

<400> 99

Cys Phe Gly Asp Asn Glu Asn His Ala Thr Val Ser Asp Ser Lys Leu  
1 5 10 15  
Val Pro

<210> 100

<211> 14

<212> PRT

<213> Homo sapiens

<400> 100

Cys Ile Gly Leu Ala Gly Thr Asp Phe Ala Asn Gln Arg Pro  
1 5 10

<210> 101

<211> 13

<212> PRT

<213> Homo sapiens

<400> 101

Cys Gln Ile Asn Lys Phe Lys Ser Arg Lys Ala Cys Gly  
1 5 10

<210> 102

<211> 13

<212> PRT

<213> Homo sapiens

<400> 102

Cys Gln Ile Asn Lys Met Lys Ser Arg Phe Ala Cys Gly  
1 5 10

<210> 103  
<211> 13  
<212> PRT  
<213> Homo sapiens

<400> 103  
Cys Gln Leu Asn Lys Met Lys Ser Arg Lys Ala Cys Gly  
1 5 10

<210> 104  
<211> 13  
<212> PRT  
<213> Homo sapiens

<400> 104  
Cys Gln Ile Asn Lys Phe Lys Ser Arg Phe Ala Cys Gly  
1 5 10

B1  
<210> 105  
<211> 38  
<212> DNA  
<213> Homo sapiens

<400> 105  
atgaaaaaac tcttaaagtc ggcgttatta tccgccgc 38

<210> 106  
<211> 44  
<212> DNA  
<213> Homo sapiens

<400> 106  
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